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It has been hypothesized that those who entered military service in the pre-September 11, 2001 era might have expectations incongruent with their subsequent experiences, increasing the risk for posttraumatic stress disorder (PTSD) or other mental disorders. A subset of Millennium Cohort Study participants who joined the military during 1995–1999 was selected and compared with a subset of members who joined the military in 2002 or later. Outcomes included new-onset symptoms of PTSD, depression, panic/anxiety, and alcohol-related problems. Multivariable methods adjusted for differences in demographic and military characteristics. More than 11,000 cohort members were included in the analyses. Those who entered service in the pre-September 11 era had lower odds of new-onset PTSD symptoms (odds ratio [*OR*] 0.74, 95% CI [0.59, 0.93]) compared with the post-September 11 cohort. There were no statistically significant differences in rates of new-onset symptoms of depression, panic/anxiety, or alcohol-related problems between the groups. The cohort who entered military service in the pre-September 11 era did not experience higher rates of new-onset mental health challenges compared with the cohort who entered service after September 11, 2001. Findings support the concept that the experience of war, and resulting psychological morbidity, is not a function of incongruent expectations.

Since 1973, the U.S. military has relied upon volunteerism to meet recruiting goals. Motivation to join an all-volunteer military includes personal reasons, such as patriotism, employment, pursuit of education, fellowship, and change of lifestyle. External factors that may influence this decision include civilian employment opportunities, public sentiment towards the military, ongoing conflicts, service-provided incentives and waivers for otherwise nonqualifying conditions, and perhaps others. For example, most of the services struggled to meet recruiting goals in the late 1990s when the U.S. unemployment rate was relatively low (U.S. General Accounting Office, 2003). During this time, a study from the U.S. General Accounting Office (2001) that utilized data from a 1999 Department of Defense (DoD) survey of active duty personnel reported the top reasons for enlisted members to join the US military were education benefits, training for civilian employment, travel and experiences, personal growth, and "to figure out what to do" (p. 14). Propensity for military service rose immediately after the events of September 11, 2001, and peaked in November 2001, remained relatively stable through November 2003, began declining in May 2004, and dropped dramatically in June 2006 (U.S. Department of Defense, 2008). This trend likely represents an increase in patriotism in the aftermath of September 11, 2001 (Hilliard, 2003), that began to subside with the passage of time and as the conflicts in Iraq and Afghanistan persisted. These patterns likely reflect a shift in the reasons for joining the U.S. military before and shortly after

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September 11, 2001. Prior to the terrorist attacks, top reasons for joining the military were more centered upon personal gain (i.e., education benefits, acquiring a marketable skill, etc.). In the post-September 11 era, however, there was likely a shift where proportionately more were joining to serve their country (i.e., patriotism).

There is strong evidence that combat deployment is associated with mental and behavioral health problems (Fear et al., 2010; Hoge et al., 2004; Jacobson et al., 2008; B. Smith et al., 2008; T. C. Smith et al., 2008; Wells et al., 2010). It is unclear whether the effects of combat exposure on mental health outcomes might differ according to one's motivation to enter military service, as we feel is likely the case before and after the events of September 11, 2001. Thus, we hypothesized that individuals entering the military in the aftermath of September 11, 2001 would be more mentally prepared for the high likelihood of deployment and combat, in contrast to those who entered the military pre-September 11, when the likelihood of combat deployment was much lower. The objective of this study was to compare risk for mental health problems between those entering military service before and after this pivotal date.

Method

Participants

This study consisted of Millennium Cohort participants from Panel 1 (2001–2003) and Panel 2 (2004–2006) enrollments. The Panel 1 baseline (2001–2003) and first follow-up (2004–2006) questionnaires were completed by 77,047 and 55,020 service members, respectively. The number of Panel 2 members completing baseline (2004–2006) and first follow-up (2007–2008) questionnaires, were 31,110 and 17,152, respectively. Hence, the number of participants who completed both the baseline and first follow-up questionnaires was 72,172.

To limit disparities in age and years of service between the two groups, respondents were excluded from the study if they were in Panel 1 with more than 5 years of service prior to October 1, 2000 ($n = 43{,}917$). To ensure members of the post-September 11 group had signed up for military service after September 11, 2001, Panel 2 respondents who entered the service prior to January 1, 2002 ($n = 11{,}443$) were excluded. To ensure accurate temporal sequencing for exposures and outcomes, Millennium Cohort Study participants who deployed prior to completing a baseline questionnaire or were deployed at the time of questionnaire completion ($n = 3{,}892$) were excluded. Finally, participants who were missing responses related to outcomes of interest at baseline ($n = 726$) or follow-up ($n = 863$), or were missing key variables at baseline ($n = 314$) were also excluded. After all exclusions, the total study sample was 11,017.

The Naval Health Research Center Institutional Review Board approved this study and all Millennium Cohort participants submitted a written consent with the baseline questionnaire. A more detailed description of the Millennium Cohort Study has been published elsewhere (Ryan et al., 2007).

Measures

Outcomes included in this study were newly identified positive screens for PTSD, depression, panic or other anxiety disorder, and alcohol-related problems at follow-up using self-reported data. A positive screen for new-onset PTSD symptoms was assessed using responses to the PTSD Checklist-Civilian Version. In this study, the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text rev., *DSM-IV-TR*; American Psychiatric Association [APA], 2000) criteria for PTSD symptoms was used. The PCL-C is a 17-item self-report measure of PTSD symptoms in which participants rate the severity of each symptom during the past 30 days on a Likert scale ranging from 1 (*Not at all*) to 5 (*Extremely*). A positive screen for PTSD symptoms was met when a participant reported a moderate or higher level of at least one intrusion symptom, three avoidance symptoms, and two hyperarousal symptoms (APA, 2000). The *DSM-IV-TR* criteria alone are reported to have 100% sensitivity and specificity of 92.0% (Brewin, 2005). Internal consistency of the PCL-C in the Millennium Cohort, using α was .94), indicated that the PCL-C was a reliable measure for screening PTSD symptoms this population (Smith, Smith, Jacobson, Corbeil, and Ryan, 2007). A positive screen for new-onset depression symptoms was assessed using the 9-item depression scale on the Primary Care Evaluation of Mental Disorders Patient Health Questionnaire (PHQ; Kroenke & Spitzer, 2002; Spitzer, Kroenke, & Williams, 1999; Spitzer, Williams, Kroenke, Hornyak, & McMurray, 2000). Sensitivity of .93 and specificity of .89 using a cut score of 5 were reported for major depressive disorder (Fann et al., 2005). Using a 4-point Likert scale, participants rated the severity of each depressive symptom from *Not at all* to *Nearly every day* during the previous 2 weeks prior to questionnaire completion. Participants were defined as newly screening positive for depression symptoms at follow-up if they met the following two criteria: (a) endorsed having a depressed mood or anhedonia, and (b) responded *more than half the days* or *nearly every day* to at least five of the nine items, where suicidal ideation was counted if present at all (Spitzer et al., 1999). The PHQ was also used for screening new-onset panic or other anxiety symptoms and symptoms of an alcohol-related problem (Spitzer et al., 1994). New-onset symptoms were identified for those who screened positive at follow-up among those with a negative screen for that outcome at baseline, with all outcomes coded as binary variables.

Panel 1 participants who joined the military during 1995–1999 were categorized as pre-September 11; Panel 2 respondents were categorized as post-September 11 if they entered the service after January 1, 2002. Date of entry into the military was determined using the Basic

Active Service Date (BASD) provided by the Defense Manpower Data Center (DMDC). The DMDC provided additional data, including sex, birth year, race/ethnicity, education, marital status, branch of service, service component, military pay grade, military occupation, date of separation, and deployment experience in support of the operations in Iraq and Afghanistan from 2001–2008.

In addition to the demographic and military characteristics previously mentioned, the following variables were included in the full adjusted model: deployment status, combat experiences, baseline smoking status, baseline measurement of life stressors, baseline aggregate mental health, years of service, and military separation status. Service members were defined as deployers if they had at least one deployment between the baseline and follow-up assessments. Self-reported combat experiences were assessed at follow-up to further classify deployment as deployed with or without combat. Combat experiences consisted of personally witnessing or being exposed in the 3 years prior to completing the questionnaire to a person's death due to war or disaster, physical abuse, dead or decomposing bodies, maimed soldiers or civilians, or prisoners of war or refugees. Baseline smoking status (nonsmoker, past smoker, and current smoker) was determined using survey items addressing lifetime smoking of at least 100 cigarettes (five packs), a successful attempt to quit smoking, and cigarette use in the past year. We adapted a scoring mechanism from the Holmes and Rahe Social Readjustment Rating Scale to evaluate baseline life stressors, including divorce, bankruptcy, sexual assault or harassment, violence, death of a loved one, or illness or injury (Holmes & Rahe, 1967). After assigning a score to each life stress item, the scores were summed and then categorized as low/mild ($<$200), moderate (200–299), and major ($\geq$300). A baseline dichotomous aggregate mental health variable was derived from self-reported symptoms for PTSD, depression, panic or other anxiety disorder, alcohol-related problems, self-report of a provider-diagnosed mental health condition, or medication use for anxiety, depression, or stress. Subjects who answered affirmatively to one or more of the questions on mental health diagnoses, or medication use for these mental health diagnoses, or alcohol-related problems were coded as positive for the baseline mental health aggregate variable. Self-reported provider diagnosis was determined based on a participant's response to the question, "Has your doctor or other health professional ever told you that you have any of the following conditions?" The mental health conditions listed were depression, manic-depressive disorder, PTSD, and schizophrenia/psychosis. The Millennium Cohort questionnaire includes the PHQ question, "Are you currently taking any medicine for anxiety, depression, or stress?"; this question was used to assess medication use. Years of service were calculated as the time from BASD to the baseline survey date. In addition, participants were categorized as separated from military service if the date of separation was prior to the follow-up survey date.

Statistical Analyses

Univariate analyses were conducted to examine the unadjusted associations between pre- and post-September 11 accession periods and baseline characteristics as well as new-onset mental health symptoms after approximately 3 years of follow-up. Note that in the univariate analyses, mental health provider diagnosis or medication use are shown as separate variables. In the multivariable analyses, these were combined with other mental health assessments that comprised the baseline aggregate mental health variable. Preliminary analyses were performed to assess potential confounders, which were defined as changing the association between each mental health outcome and accession period by 10% or more when included in this model (Maldonado & Greenland, 1993). Separate logistic regression models were created to examine the associations between accession period and a newly identified positive screen at follow-up for each of the following symptom sets: PTSD, depression, panic or anxiety, and an alcohol-related problem. The models were adjusted for all variables; however, for each specific condition, the aggregate baseline mental health variable excluded the respective mental health variable to ensure assessment of new onset for each outcome. To assess multicollinearity, an initial model analysis was performed using a variance inflation factor of 4 or greater to indicate the presence of multicollinearity. Data management and statistical analyses were performed using SAS software version 9.2 (SAS Institute, Inc., 2008).

Results

Comparing baseline characteristics between the pre-September 11 and post-September 11 groups (Table 1), participants who were in the pre-September 11 group were significantly more likely to be men, born in 1979 or earlier, of Asian/Pacific Islander or other race/ethnicity, officers, on active duty, in the U.S. Army or U.S. Marine Corps, combat specialists, either nondeployed or deployed with combat, separated from service, to have experienced moderate or major significant life stressors, to have symptoms of an alcohol-related problem, and be less likely to report provider-diagnosed mental health disorders or the use of medication for the treatment of anxiety, depression, or stress, at baseline. Although there were many differences in baseline characteristics, no significant differences were observed in the frequency of new-onset symptoms of PTSD, depression, panic or anxiety symptoms, or symptoms of an alcohol-related problem between the pre-September 11 and post-September 11 groups (Table 2).

In multivariable logistic regression analyses (Table 3), the pre-September 11 group was at significantly lower odds of new-onset mental health symptoms in comparison to the post-September 11 group. These associations remained statistically significant, after adding separation status, as well as adding separation status and years of service, but not when only the years of service variable was added. The pre-September 11 group was also at lower adjusted

Table 1
Baseline Characteristics of Selected Millennium Cohort Participants by Entry Into Military Service Before or After September 11, 2001

	Before September 11		After September 11		
Variable	*n*	%	*n*	%	χ^2
Sex					52.2***
Male	4,969	61	1,485	53	
Female	3,235	39	1,328	47	
Birth year					1,555.3***
Pre-1970	663	8	143	5	
1970-1979	5,910	72	1,002	36	
1980 or later	1,631	20	1,668	59	
Race/ethnicity					30.9***
Non-Hispanic White	5,670	69	2,043	73	
Non-Hispanic Black	845	10	287	10	
Asian/Pacific Islander	726	9	173	6	
Hispanic	735	9	260	9	
Other	228	3	50	2	
Education					0.7
Some college or less	6681	81	2310	82	
Bachelor's degree or higher	1523	19	503	18	
Marital status					1.3
Never married	5,459	67	1,901	68	
Married	2,551	31	843	30	
Other	194	2	69	3	
Military pay grade					20.8***
Enlisted	6,910	84	2,469	88	
Officer	1,294	16	344	12	
Service component					90.7***
Active duty	5,667	69	1,667	59	
Reserve/National Guard	2,537	31	1,146	41	
Service branch					251.4***
Army	4,333	53	1,147	41	
Air Force	1,795	22	989	35	
Navy/Coast Guard	1,479	18	569	20	
Marine Corps	597	7	108	4	
Occupation					107.6***
Other	5,805	71	2,147	76	
Combat specialist	1,485	18	280	10	
Health care specialist	914	11	386	14	
Deployment and combat					37.2***
Nondeployed	5,920	72	1,937	69	
Deployed without combat	1,008	12	473	17	
Deployed with combat	1,276	16	403	14	
Mean years of service (SD)	3.97	2	2.71	<1	1386.0***
Separated					132.5***
No	6,521	80	2,508	89	
Yes	1,683	21	305	11	
Smoking status					0.9
Nonsmoker	4,767	58	1,662	59	
Past smoker	1,728	21	574	20	
Current smoker	1,709	21	577	21	

(Continued)

Table 1
Continued

Variable	Before September 11		After September 11		
	n	%	*n*	%	χ^2
Significant life stressor					7.7*
Low/mild	7,282	89	2,526	90	
Moderate	769	9	256	9	
Major	153	2	31	1	
PTSD symptoms					1.2
No	7,746	94	2,671	95	
Yes	458	6	142	5	
Depression symptoms					1.8
No	7,834	96	2,703	96	
Yes	370	5	110	4	
Panic or anxiety symptoms					0.7
No	7,902	96	2,719	97	
Yes	302	4	94	3	
Alcohol-related problems					28.7***
No	6,740	82	2,434	87	
Yes	1,464	18	379	14	
Mental health provider diagnosis or medication use					8.0**
No	7,527	92	2,532	90	
Yes	677	8	281	10	

Note. The total study sample included was $N = 11{,}017$. PTSD = Posttraumatic stress disorder.
*$p < .05$. **$p < .01$. ***$p < .001$.

Table 2
New-Onset Mental Health Symptoms of Selected Millennium Cohort Participants by Entry Into the Military Service Before or After September 11, 2001

Variable	Before September 11		After September 11		
	n	%	*n*	%	χ^2
PTSD					1.3
No	7,312	95	2,509	95	
Yes	369	5	142	5	
Depression					0.1
No	7,184	97	2,431	97	
Yes	237	3	84	3	
Panic or anxiety					0.0
No	7,590	96	2,612	96	
Yes	312	4	107	4	
Alcohol-related problems					2.4
No	6,239	93	2,229	92	
Yes	501	7	205	8	

Note. The total study sample for the PTSD model was $n = 10{,}332$; depression was $n = 9{,}936$; panic or anxiety was $n = 10{,}621$; and alcohol-related problems was $n = 9{,}174$. Total sample may not match for each outcome because of differences in number of participants with an individual outcome at baseline. PTSD = Posttraumatic stress disorder.
*$p < .05$. **$p < .01$. ***$p < .001$.

odds for depression symptoms, but only after adjustment for the variables in the original model and whether or not participants had separated from service by the time of their follow-up survey, $OR = 0.74$, 95% CI [0.56, 0.99]. New-onset symptoms of panic/anxiety or alcohol-related problems were not associated with pre- or post-September 11 accessions.

Discussion

Massive political and social changes followed in the decade after the events of September 11, 2001. During the last 10 years, the United States has been engaged in combat operations that have spanned two large theaters of operations and defined a generation of U.S. military personnel who joined active service rosters post-September 11, 2001, only knowing a period of high operational tempo with multiple and often lengthy deployments. Though the combination of advances in battlefield weaponry and improvements in medical research have led to increased personnel readiness, effective preventive measures, and preservation of health, there has been a marked increase in mental health symptoms and diagnoses postcombat deployment that may have lasting implications. Thus, our original premise for this study was that individuals entering the military in the aftermath of September 11 would be more mentally prepared for the high likelihood of deployment and combat in contrast to those who entered the military

Table 3
Adjusted Odds Ratios and 95% Confidence Intervals of New-Onset Symptoms of Selected Millennium Cohort Participants by Entry into the Military Service Before September 11, 2001

	Base model		Base and service years		Base and separation		All	
Variable	*OR*	95% CI	*OR*	95% CI	*OR*	95% CI	*OR*	95% CI
PTSD	0.74	[0.59, 0.93]	0.80	[0.64, 1.01]	0.73	[0.58, 0.91]	0.79	[0.63, 0.99]
Depression	0.78	[0.58, 1.03]	0.83	[0.62, 1.11]	0.74	[0.56, 0.99]	0.80	[0.60, 1.08]
Panic or anxiety	0.95	[0.73, 1.22]	1.00	[0.77, 1.29]	0.93	[0.72, 1.20]	0.98	[0.76, 1.27]
Alcohol problems	0.91	[0.75, 1.10]	0.91	[0.75, 1.11]	0.89	[0.73, 1.08]	0.90	[0.74, 1.10]

Note. CI = Confidence interval; PTSD = Posttraumatic stress disorder. All adjusted odds ratios (OR) used after September 11th = 1.0 as the reference category. The base model adjusted for sex, birth year, race/ethnicity, education, marital status, military pay grade, service component, service branch, occupation, deployment and combat status, smoking status, significant life stressor, and baseline other mental health conditions excluding the respective set of symptoms.

pre-September 11, when the likelihood of combat deployment was much lower. Using pre- and post-September 11 groups as a proxy for perhaps differing reasons to join the military, we found that those who joined the military before September 11, 2001, were at decreased odds for newly reported symptoms of PTSD and depression, but only when additionally adjusting for separation from service. It is unclear exactly why adjusting for separation is important, but may be in part due to the positive association between mental health problems and increased risk for separation (Hoge et al., 2002). These findings are the first of which we are aware to assess mental health symptom reporting by comparing groups who joined the U.S. military for possibly different reasons, yet both experienced combat deployments.

The results of multivariable modeling demonstrated that joining the military before September 11 was slightly protective for symptoms of PTSD and depression when adjusting for multiple demographic and military-related variables, including separation status. Additionally, adjusting for combat experiences during deployment, deployment length, or number of deployments did not account for these differences (data not shown). Although speculative, this may reflect resiliency in the pre-September 11 group that may be attributable to better coping skills, experience with previous deployments, and perhaps more realistic expectations of service in the military. The post-September 11 group may represent proportionately more individuals who had unrealistic expectations of combat, such as easily identifiable enemy combatants, as opposed to the reality of urban guerrilla warfare and the ever-present danger of improvised explosive devices. It is also possible that the post-September 11 group had proportionately more combat experiences because of being younger overall than the pre-September group, which could account for the decreased odds of mental health outcomes among the pre-September 11 group. However, multivariable models were adjusted for birth year and combat experiences. Additionally, age at deployment was not statistically significantly related to new-onset PTSD or depression symptoms in a subanalysis consisting of only deployers.

We considered whether differences in the U.S. unemployment rate pre- and post-September 11, 2001 might have created selection factors that resulted in a population entering the military after this date at higher risk for PTSD symptoms and other mental health conditions. According to the U.S. Bureau of Labor Statistics (2011), the unemployment rate during the pre-September 11 period ranged between 4.2% to 5.6%, whereas that of the post-September 11 period ranged between 5.5% to 6.0%. It is possible that unemployment differentially motivated those in the post-September 11 group to enter the military as a means of employment compared with the pre-September 11 group. A 2005 report prepared by the Heritage Foundation (Washington, DC), however, found only minor (0–2 percentage points) differences in neighborhood income levels and education between those who enlisted between October 1998 to September 1999 and January 2003 to September 2003 (Kane, 2005). In this report, the minor differences noted favored proportionately higher income levels and education among the 2003 group. Both income (expressed as rank) and education have been found to be inversely related to mental disorder risk in our previous studies (T. C. Smith et al., 2008; Wells et al., 2010). Taken together, these findings suggest that the small difference in unemployment rates between the groups would likely not bias study findings to an appreciable amount.

It is interesting to note that the pre-September 11 group had a higher proportion of participants who had separated from the military than did the post-September 11 group at the time of their follow-up survey (20.5% vs. 10.8%, respectively). We might have expected some impact of separation on study results because those with mental health problems (Hoge et al., 2002) and those who are dissatisfied with service are more likely to separate. However, adjusting for separation in the multivariable model had little effect on our mental health outcomes. Previously, we have demonstrated that symptoms of alcohol-related problems, depression, and PTSD are related to military deployment and combat experience (Jacobson et al., 2008; T. C. Smith et al., 2008; Wells et al., 2010), and that poor predeployment mental or physical functioning predicted a higher

likelihood of postdeployment PTSD symptoms (LeardMann, Smith, Smith, Wells, & Ryan, 2009). These factors appear far more important than reason to enter the service in predicting vulnerability to several long-term consequences of engaging in combat.

This study has some limitations that must be considered. Because there currently are no questions in the Millennium Cohort Study questionnaire about reasons for joining the military, period of service entry had to be used as a proxy for underlying motivation for this decision. As previously discussed, many contributing factors may influence someone's reason for entering military service. We suggest, however, that the increase in enlistment in the period immediately following September 11, 2001 could be associated with increased patriotism. The Millennium Cohort, and the subset used in this study, is a sample of the military population and may not be representative of all military personnel or those who deploy. However, investigations of bias have shown the Cohort to well represent the military and report data reliably (Riddle et al., 2007; Smith et al., 2007). Nonresponse to the follow-up survey was greater among the post-September 11 group and may have biased our results. However, an in-depth study of possible nonresponse bias, among Panel 1 participants based on propensity scores and regression analyses, compared complete case analysis to an analysis weighted for nonresponse and concluded that nonresponse to follow-up did not result in appreciable bias in the behavioral and mental health outcomes investigated (Littman et al., 2010). These findings, however, should be interpreted with caution because our study sample was restricted, based on the number of years of military service in the pre-September 11 group to create comparable exposure groups. This restriction resulted in large exclusions of the study sample. Entry date into the military was obtained using electronic personnel files, which may have allowed for a small amount of misclassification of exposure, but this was expected to be nondifferential with respect to the outcomes studied. In addition, although we adjusted for variables such as birth year, education level, service branch, service component, years of service, and combat deployment experience, there may be other factors related to the period of service entrance that were not collected and adjusted for in these analyses, such as possible generational differences in the reporting of mental symptoms.

Despite these limitations, this study has important strengths. Given the prospective design of the Millennium Cohort Study, we were able to assess new onset of mental health symptoms, removing those individuals from analyses who had mental health symptoms at baseline. In addition, we were able to include all service branches as well as all components (active duty, Reserve/National Guard) in our study. Separation status at the time of the follow-up questionnaire was included for adjustment in our multivariable models, accounting for differences in separation between the two groups. In addition, only this investigation was possible, given the unique design of the Cohort, which includes separate panels who joined the military at different times.

Future research may be able to better define the relationship between perceived reason for military service entrance and subsequent service-related challenges. For example, the U.S. military has been developing a Recruit Assessment Program (RAP) for several years (Hyams et al., 2002). The RAP survey instrument includes questions on motivation to join the military, career plans, preservice health, and behavioral issues. To date, RAP surveys collected at a large Marine Corps basic training facility have been valuable in describing pre-enlistment risk factors, such as alcohol use and adverse childhood experiences, and their relationship to postenlistment health and functioning (LeardMann, Smith, & Ryan, 2010; Phillips, Leardmann, Gumbs, & Smith, 2010; Young, Hansen, Gibson, & Ryan, 2006). If such entrance evaluations are expanded to the entire U.S. military and linked to the Millennium Cohort and other indicators of health outcomes, they may provide a more comprehensive life-span view of any impact of military service on health.

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14. ABSTRACT

Background. After September 11, 2001, the United States entered into extended operations in Iraq and Afghanistan. Individuals joining the military in the post-September 11 era committed to potential prolonged and repeated deployments. It has been hypothesized that those who entered military service in the pre-September 11 era might have expectations incongruent with their subsequent experiences, and this may increase their risk for mental disorders.
Methods. A subset of Millennium Cohort members who joined the military during 1995–1999 were compared with a subset of Millennium Cohort members who joined the military in 2002 or later. Outcomes included new-onset posttraumatic stress disorder (PTSD), depression, panic/anxiety disorders, and alcohol-related problems. Multivariable methods were adjusted for differences in demographic and military characteristics.
Findings. Those who entered service in the pre-September 11 era had slightly lower odds of new-onset PTSD (odds ratio 0.74, 95% confidence interval 0.59–0.93) compared with the post-September 11 cohort. There were no statistically significant differences in rates of new-onset depression, panic/anxiety disorders, or alcohol-related problems between the groups.
Interpretation. The cohort who entered military service in the pre-September 11 era did not experience higher rates of new-onset mental disorders when compared with the cohort who entered service after September 11, 2001.

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